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VANM274.001APC

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant

Dubois et al.

Appl. No.

10/567,197

Filed

September 21, 2006

For

POLYMER-BASED

COMPOSITES COMPRISING CARBON NANOTUBES AS A

FILLER, METHOD FOR PRODUCING SAID COMPOSITES, AND ASSOCIATES USES

Examiner

Unknown

Group Art Unit:

1754

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Marina L. Gordey, Reg. No. 52,950

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Dear Sir:

Applicant hereby requests that the Official Filing Receipt, a copy of which is enclosed, be corrected to reflect the following: in the title, please add a comma after the word FILLER. For your convenience, a copy of the first page of the specification and cover page of the PCT publication is enclosed.

: 8055475590

KNOBBE, MARTENS, OLSEN

07-11-07 11:06

Appl. No.

10/567,197

Filed

September 21, 2006

We look forward to receiving the corrected filing receipt in due course.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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Marina L. Gordey Registration No. 52,950

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	APPL NO.	FILING OR 371(c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	TOT CLMS	IND ÇLMS
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CONFIRMATION NO. 9583

20995 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614 FILING RECEIPT

OC000000023594491

Date Mailed: 05/02/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filling Receipt, please mall to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Phillippe Dubois, Braives, BELGIUM; Michael Alexandre, Ougree, BELGIUM; Daniel Bonduel, Mons, BELGIUM; Mainil Michael, Trivieres, BELGIUM;

Assignment For Published Patent Application

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Power of Attorney: The patent practitioners associated with Customer Number 20995.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/BE04/00113 08/05/2004 which claims benefit of 60/492,613 08/05/2003

Foreign Applications

EUROPEAN PATENT OFFICE (EPO) 04447025.0 02/04/2004

If Required, Foreign Filing License Granted: 04/28/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US10/567,197

Projected Publication Date: 08/09/2007

... PAGE 3/7 * RCVD AT 7/11/2007 2:05:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/22 * DNIS:2738300 * CSID:8055475590 * DURATION (mm-ss):02-14

Non-Publication Request: No

Early Publication Request: No

Title

Polymer-based composites comprising carbon nanotubes as a filler method for producing said composites, and associated uses

Preliminary Class

502

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VANM274.001APC

PATENT

POLYMER-BASED COMPOSITES COMPRISING CARBON NANOTUBES AS A FILLER, METHOD FOR PRODUCING SAID COMPOSITES, AND ASSOCIATED USES

Field of the Invention

[0001] The present invention relates to the field of materials and more particularly to the field of the composite materials defined below as microcomposites and nanocomposites.

[0002] The present invention relates especially to a process for obtaining a composite material comprising a matrix of at least one polymer in which are dispersed carbon nanotubes serving as filler. The present invention also relates to said composites thus obtained and to uses thereof in the field of nanotechnology.

Prior art

[0003] Polymer materials were developed at the start of the 20th-century and they currently occupy an increasingly important place in our daily life.

[0004] For that very reason, industrial pressure is currently such that it demands increasing specialization of applications, and it is thus necessary to propose more and more efficient materials to satisfy this need.

[0005] In the case of polymer materials, this demand implies the provision of solutions to overcome the inherent weaknesses of these materials, which are especially their relative lack of mechanical strength and their flammable nature.

[0006] It has thus been proposed to combine these polymer materials with other components known as "fillers" in order

(12) DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)

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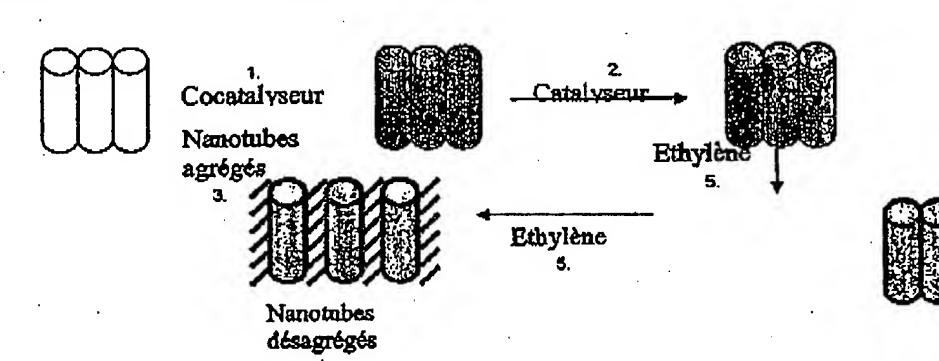
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- (81) États désignés (sauf indication contraire, pour tout titre de protection nationals disponible): AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DB, DK, DM, DZ, BC, BB, BG, BS, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KB, KG,

[Suite sur la page suivante]

(54) Title: POLYMER-BASED COMPOSITES COMPRISING CARBON NANOTUBES AS A FILLER, METHOD FOR PRODUCING SAID COMPOSITES, AND ASSOCIATED USES

(54) Titre: COMPOSITES A BASE DE POLYMERE COMPRENANT COMME CHARGE DES NANOTUBES DE CARBONE: PROCEDE D'OBTENTION ET UTILISATIONS ASSOCIES



- 1. CO-CATALYST
- 2. CATALYST
- 3. AGGREGATED NANOTUBES
- 4. DISAGGREGATED NANOTUBES
- 5. ETHYLENE

(57) Abstract: The invention relates to a method for producing carbon nanotubes in a dispersed state, said method being characterised in that it comprises a stage whereby polymerisation is carried out from at least one so-called monomer of interest, in the presence of a catalytic system, said catalytic system comprising a co-catalyst/catalyst catalytic comple that is supported by a catalyst carrier, said catalyst carrier corresponding to said carbon nanotubes. The invention also relates to composite materials obtained by said method, and to a catalytic system for implementing said method. The invention further relates to the use of the inventive method and products in the field of polymers, especially that of nanotechnologies.

[Suite sur la page suivante]